



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,476	09/20/2001	John W. Orcutt	TI-31612	3137

23494 7590 06/09/2003

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

SPECTOR, DAVID N

ART UNIT	PAPER NUMBER
----------	--------------

2873

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/957,476

Applicant(s)

ORCUTT ET AL.

Examiner

David N. Spector

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 September 2001 and 18 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 18-20 is/are allowed.
- 6) ☐ Claim(s) 1-4 and 8-14 is/are rejected.
- 7) ☐ Claim(s) 5-7 and 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s): 5
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: DETAILED ACTION

DETAILED ACTION***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claim 4 is rejected under 35 U.S.C. 112, first paragraph**, because the specification, while being enabling for an packaged micromirror assembly with a position sensor therein including a single light source and multiple detectors [Emphasis added] (Page 15, Line 26-Page 16, Line 1); or alternatively, for a similar assembly with a position sensor therein including multiple light sources and a single detector [Emphasis added] (Page 16, Line 1-4); it does not reasonably provide enablement for a packaged micromirror assembly with a position sensor therein that includes the limiting case (*e.g. where the phrase "at least one" is taken to mean "one and only one"*) permitted by the instant claim 4, of one light source [Emphasis added] (Claim 4, Line 2) and one detector [Emphasis added] (Claim 4, Line 4) the combination providing a plurality of reflection paths over which the intensity of reflected light is measured [Emphasis added] (Claim 4, Line 7-8). The instant specification, therefore, would not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with the instant claim 4.

3. **Claim 14 is rejected under 35 U.S.C. 112, first paragraph**, because the specification, while being enabling for a electronic system comprising a packaged micromirror assembly with a position sensor therein including a single light source and multiple detectors [Emphasis added] (Page 15, Line 26-Page 16, Line 1); or alternatively, for a similar assembly with a position sensor therein including multiple light sources and a single detector [Emphasis added] (Page 16, Line 1-4) does not reasonably provide enablement for a packaged micromirror assembly with a position sensor therein which includes the limiting case (*e.g. where the phrase "at least one" is*

cludes the limiting case (*e.g. where the phrase "at least one" is taken to mean "one and only one"*) permitted by the instant claim 14 of one light source [Emphasis added] (Claim 14, Line 2) and one detector (Claim 14, Line 4) [Emphasis added] the combination providing a plurality of reflection paths over which the intensity of reflected light is measured [Emphasis added] (Claim 14, Line 7-8). The instant specification, therefore, would not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with the instant claim 14.

Claim Rejections - Nonstatutory Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

5. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. **Claims 1-3 and 8-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting** as being unpatentable over claims 15, 17, 18, and 5-10, respectively, of copending Application No. 09/953,463 (hereinafter '463) filed 09/12/2001. Although the conflicting claims are not identical, they are not

Art Unit: 2873

patentably distinct from each other for the following reasons. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

NOTE: The '463 application was allowed on 05/07/2003. The claims allowed in '463 are: Claims 2, 3, 5-7, 9-11 and 14 (as originally filed); Claims (new) 22, 23, 25, 27, and 28 (as filed under a preliminary amendment); and Claims (amended) 1, 8, 12, 15-18, 20, 21, and 24 (as amended on 02/24/2003). Claims 4, 13, 19, and 26 in '463 were canceled by applicant on 02/24/2003. The '463 application is presently in the first phase of the publication cycle and it is now unavailable. The text of the allowed claims therein was provided to the current examiner by applicant's representative on 05/30/2003. The text of the claims as allowed from '463 application was provided by applicant's representative. This text is attached to an Interview Summary (Form PTOL-413B) enclosed with this Office action.

(a) **In regard to claim 1** Independent claim (amended) 15 of the '463 application recites, *inter alia*, all of the features/limitations of the instant independent claim 1.

(b) **In regard to claim 2** Claim (amended) 17 of the '463 application depends from independent claim (amended) 15 therein and recites the same features/limitations presented in claim 2 of the instant application.

(b) **In regard to claim 3** Claim (amended) 18 of the '463 application depends from independent claim (amended) 15 therein and recites the same features/limitations presented in claim 3 of the instant application.

(c) **In regard to claim 8** Independent claim 5 of the '463 application recites, *inter alia*, all of the features/limitations in claim 8 of the instant application.

(d) **In regard to claim 9** Claim (amended) 6 of the '463 application depends from independent claim 5 therein and recites the same features/limitations presented in claim 9 of the instant application.

(e) **In regard to claim 10** Claim (amended) 7 of the '463 application depends from independent claim 5 therein and recites the same features/limitations presented in claim 10 of the instant application.

(e) **In regard to claim 11** Claim (amended) 8 of the '463 application depends from independent claim 5 therein and recites the same features/limitations presented in claim 11 of the instant application.

(f) **In regard to claim 12** Claim (amended) 9 of the '463 application depends from independent claim 5 therein and recites the same features/limitations presented in claim 12 of the instant application.

(g) **In regard to claim 13** Claim (amended) 10 of the '463 application depends from independent claim 5 therein and recites the same features/limitations presented in claim 13 of the instant application.

Allowable Subject Matter

7. **Claims 18, 19, and 20 allowable. Claims 5, 6, 7, 15, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims.** The following is a statement of reasons for the indication of allowable subject matter

(a) Claims 18, 19, and 20 are drawn to a method for transmitting a beam of optical data signals between a transmitter and a receiver in a wireless optical network. The invention commensurate with the aforesaid claims is distinguished by a series of steps (*e.g. recited in independent claim 18*) whereby optimal alignment is maintained between the optical axes of the transmitted beam and the receiver by using a stabilized beam pointing micromirror provided with a novel optical feedback sensor. (*e.g. orienting the micromirror to reflect the beam of optical data signals from the transmitter from an upper surface the micromirror; directing light at the underside/lower surface of the micromirror, detecting the light reflected from the underside of the micromirror at a plurality of locations and a plurality of angles; and determining the orientation of the micromirror from the light detected at the plurality of locations.*)

(b) Claims (amended) 5, 6, 7, 15, 16, and 17 (*e.g. rewritten in independent form including all of the limitations of the base claim and any intervening claims*) are drawn to a packaged micromirror assembly (claims 5-7) which embodies applicants novel optical feedback sensor, and to an electronic system (claims 15-17) which includes, *inter alia*,

Art Unit: 2873

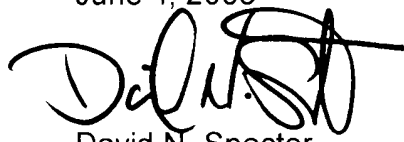
the packaged micromirror assembly. Each of claims 5, 6, 7, 15, 16, and 17 is distinguished by a novel position sensor recited therein which includes either a single light source and multiple detectors, or multiple light sources and a single detector.

Other Remarks/Information

8. The data provided by applicant regarding "Cross References to Related Applications" at the top of the first page of the specification should be updated to include the serial numbers of the two non-provisional applications (*e.g. 09/955,539 and 09/955,506*) noted therein

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Spector whose telephone number is (703) 305-1521. The examiner can normally be reached at this number Monday through Friday between 6:00 AM and 2:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps, can be reached on (703) 308-4883. The fax number for the organization where this application is assigned is (703) 308-7722.

June 4, 2003



David N. Spector
Primary Examiner